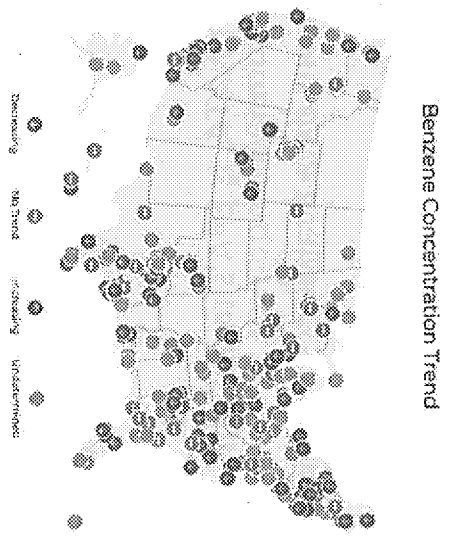
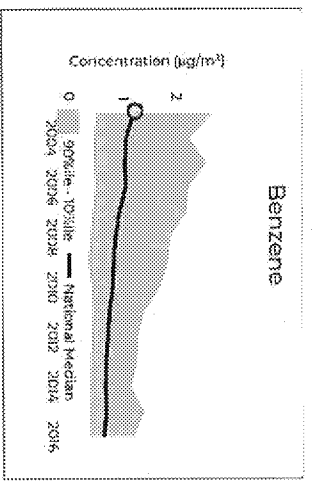


## What is NATA?

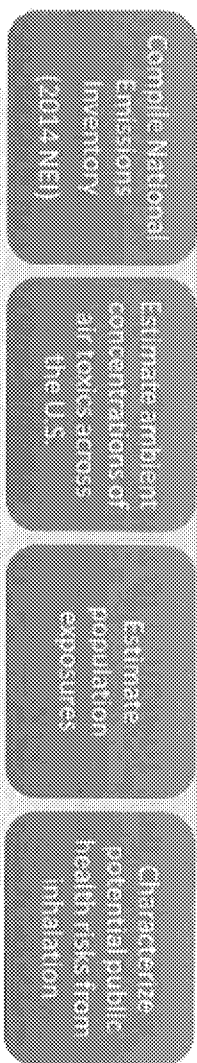
- The National Air Toxics Assessment, or NATA, is EPA's thorough review of air toxics in the United States, based on modeled air quality.
- NATA uses the best science and emissions data available to estimate health risks from air toxics.
- NATA is national in scale and intended as a *screening tool*.
- NATA can be used by the EPA and states/locals and tribes to help determine what pollutants or areas of the country to investigate further, to better understand risks.
- NATA should not be used:
  - to pinpoint risk or exposure values at a specific place (like a home or school);
  - to characterize or compare risks or exposures at local levels (such as between neighborhoods);
  - as the sole basis for risk reduction plans or regulations, or
  - to control specific sources or pollutants.

# National air toxics trends are downward

Our Nation's Air Status and Trends  
Through 2017 : Benzene (2003 – 2017)



# 2014 NATA Analytical Steps



2014 NEI includes stationary, mobile and natural sources (fires, biogenics). NATA includes 180 listed air toxics plus diesel particulate matter (PM)

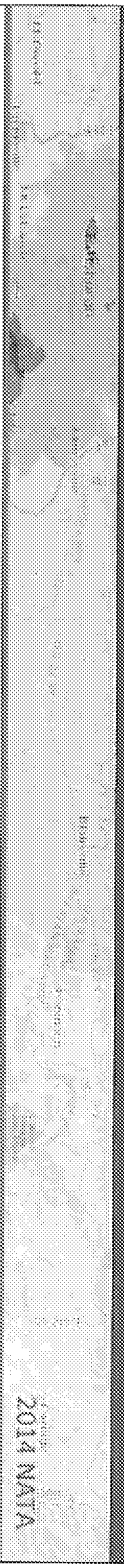
Uses CMAQ and AERMOD to predict census-tract ambient concentrations nationwide.

Includes an exposure model (HAPEM7) to account for human activity data, commuting patterns, and near-roadway exposures.

Census-tract level cancer and noncancer risks nationwide.

## What data are included in NATA?

- NATA provides screening-level estimates of the risk of cancer and other serious health effects from breathing (inhaling) air toxics.
- This helps show which air toxics and source types may contribute to health risks in certain places.
- NATA results are reported at the census tract level.
- The 2014 NATA includes estimates of ambient and exposure concentrations for 180 listed air toxics plus diesel PM, which we assess for noncancer effects only.

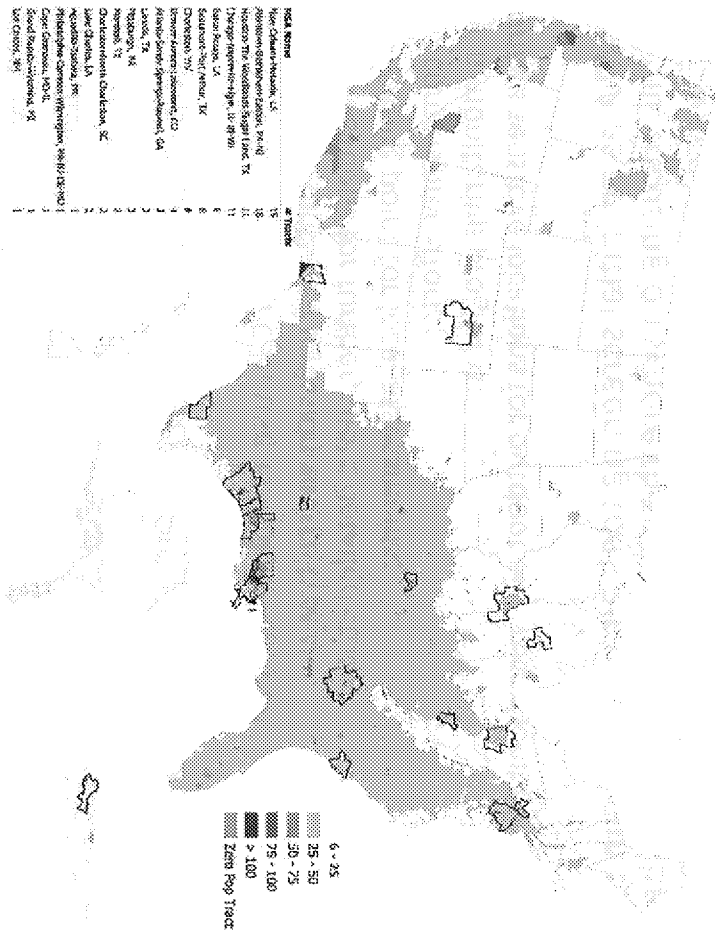


## How can states/locals and tribes use NATA?

- States/locals and tribes can use NATA results to:
  - prioritize pollutants and emission source types;
  - identify locations for further, more detailed study;
  - get a starting point for local assessments;
  - focus community efforts;
  - inform monitoring programs;
  - prioritize sensitive locations for outdoor air toxics monitoring.
- Using NATA as an initial screening tool, air agencies can then study areas in more detail, focusing on where the risks to people may be greatest.
  - They may also choose to perform a smaller scale local assessment, which allows them to use more detailed data than we can in NATA.

# 2014 NATA Results: National Average Cancer Risk

2014 NATA





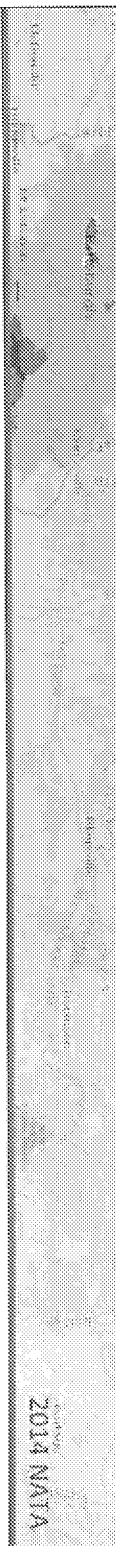
# 19 MSAs with Elevated Cancer Risks ( $\geq 100$ -in-1 million)

2014 NATA

| MSA                                     | #Tracts<br>$\geq 100$ -<br>in-1<br>million | Highest<br>Risk Tract<br>in MSA<br>( $\geq 1$ -<br>million) | MSA  | #Tracts<br>$\geq 100$ -<br>in-1<br>million | Highest<br>Risk Tract<br>in MSA<br>( $\geq 1$ -<br>million) |
|---|--|---|--|--|---|
| New Orleans-Metairie, LA**              | 19   | 2,000   | Pittsburgh, PA**                                 | 3  | 100   |
| Allentown-Bethlehem-Easton, PA-NJ       | 18   | 600   | Charleston-North Charleston,<br>SC               | 2  | 100   |
| Chicago-Naperville-Elgin, IL-IN-WI*     | 11   | 300   | Lake Charles, LA                                 | 2  | 100   |
| Houston-The Woodlands-Sugar Land,<br>TX | 11   | 300   | Marshall, TX                                     | 2  | 200   |
| Baton Rouge, LA                         | 9  | 200   | Aguadilla-Isabela, PR                            | 1  | 300   |
| Beaumont-Port Arthur, TX                | 8  | 300   | Cape Girardeau, MO-IL                            | 1  | 200   |
| Charleston, WV                          | 6  | 400   | Grand Rapids-Wyoming, MI                         | 1  | 100   |
| Denver-Aurora-Lakewood, CO*             | 4  | 500   | Las Cruces, NM                                   | 1  | 200   |
| Atlanta-Sandy Springs-Roswell, GA       | 3  | 200   | Philadelphia-Camden-<br>Wilmington, PA-NJ-DE-MD* | 1  | 100   |
| Laredo, TX                              | 3  | 100   |  |  |   |

\*\* With the exception of New Orleans-Metairie, LA (chloroprene) and Pittsburgh, PA (oven emissions), the primary risks are driven by emissions of ethylene oxide from point sources.

\* The following 5 MSAs were also in the 2011 NATR as MSAs with elevated cancer risks: Chicago-Naperville-Elgin, IL-IN-WI; Denver-Aurora-Lakewood, CO; New Orleans-Metairie, LA; Philadelphia-Camden-Wilmington, PA-NJ-DE-MD; and Pittsburgh, PA.



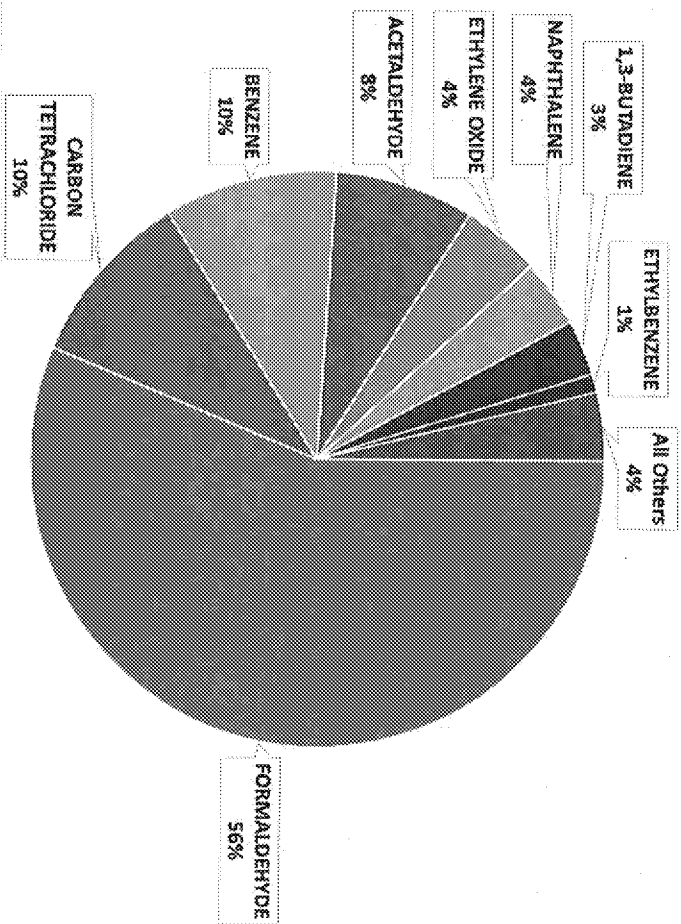
## What NATA tells us

- National average cancer risk estimated to be 30-in-1 million.
- Fewer than 1% of the census tracts in the country (106 tracts in 19 metropolitan statistical areas) have an estimated cancer risk of  $\geq 100$ -in-1 million.
- Tracts with estimated cancer risks of  $\geq 100$ -in-1 million are primarily driven by point source emissions of ethylene oxide, chloroprene, and coke oven emissions.
- Secondary formation (formaldehyde and acetaldehyde) estimated to contribute about half of the national average cancer risk.
  - Secondary formation is from both anthropogenic (stationary and mobile) sources as well as biogenic sources.



# National Average Cancer Risk Pollutant Contributions (30-in-1 million)

2014 NATA



## New risk estimates for ethylene oxide

- EPA completed its review of available health information for ethylene oxide and classified ethylene oxide as a known human carcinogen in December 2016.
  - This work included an increase in the potency estimates for ethylene oxide, which are used to inform risk estimates in 2014 NATA.
- The 2014 NATA results suggest that ethylene oxide is a potential concern in several areas across the country.
- EPA has begun to gather additional information in identified areas, focusing first on those areas with the largest estimated potential for risk.

## Next Steps

- 2014 NATA will be rolled out soon, on the following website:  
<https://www.epa.gov/nata>
- To keep you informed as the EPA works to address ethylene oxide, a separate website will be updated regularly. The address will be  
<https://www.epa.gov/ethylene-oxide>
- We will send you a link to the preview SharePoint site this afternoon.

